

NATIONAL TUNA WEEK NOVEMBER 6-15

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NOVEMBER

1952

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WESTGATE-SUN HARBOR ISSUE

*Insuring the present
... and the future*



AS IN THE PAST SO IN THE FUTURE

ALL ACTIVITIES OF THE AMERICAN TUNABOAT ASSOCIATION

ARE DIRECTED TO IMPROVEMENT AND PROSPERITY

OF THE TUNA INDUSTRY

Sam Crivello, president

Harold F. Cary, manager

AMERICAN TUNABOAT ASSN.

No. 1 Tuna Lane

San Diego, California

Why Waste Time and Money Using TWO Coats for Hull and Topside?

NAVICOTE High Gloss

ONE COAT WHITE

**Does the Job Better—
You Save Hours and Dollars**

You'll agree there's no sound reason for using two coats of paint on hull and topside when ONE COAT will do the job better. NAVICOTE High Gloss One Coat White saves you precious hours—and cuts your painting bill in half.

NAVICOTE High Gloss One Coat White is one of the whitest of whites, it brushes easily, is self leveling and STAYS white for lasting beauty and protection.

You'll find it profitable to protect your boat with these other NAVICOTE Marine Finishes: NAVICOTE Copper (S.M.) Anti-Fouling . . . 7-11 Copper Anti-Fouling . . . Deck and Interior Marine Finishes . . . Engine Finishes . . . Marine Spar Varnish . . . Boottopping.



A Salute to Westgate— Sun Harbor Company

It is with genuine pleasure that we offer our heartiest congratulations to the Westgate Sun Harbor Company on the opening of the new San Diego plant. The famous "Breast-O'-Chicken" Tuna holds a highly respected position in the food field. And we're proud to say Westgate and other owners of fishing fleets hold "NAVICOTE" and "DURAHART" in the same high regard.

Get full details on NAVICOTE High Gloss One Coat White from your nearby Navicote and Durahart Dealers: ATWELL SUPPLY CO., 1150 Harbor Drive, San Diego; SEASIDE SUPPLY STORES, 803 S. Palos Verdes, San Pedro; CHESLEY MFG. COMPANY, 1219 E. Florence Avenue, Los Angeles.

HART and BURNS Inc.

Manufacturers of **DURAHART** Protective Coatings
Riverside, Calif. — Dallas, Tex.



The GLOBE

An International News
File compiled from
FOREIGN REPORTS
by
Marine Press Association

St. Johns, Newfoundland—Shrimp have been found recently in Newfoundland waters, an August 23 American Consular report from St. John's states. It is reported that shrimp have also been found near the northern edge of the Grand Banks, in the Gulf of St. Lawrence, and off the coast of Labrador.

It is rumored that certain United States and Canadian mainland interests are looking into the matter of shrimp fishing off the east and west coasts of Newfoundland, where shrimp of marketable size were discovered about a year ago by a government exploratory vessel.

Shrimp sell in Montreal for C\$2.50 per pound and in St. John's, when available from the mainland, for C\$0.75 per quarter pound.

The local press has recently declared that two United States fish packing firms are now engaged in shrimp fishing in Labrador waters; so far, however, no information of value can be secured from either official or commercial sources. One daily paper claims that explorations has established that the bottom of Lake Melville (Labrador) in certain areas is literally encrusted with large jumbo shrimp. Inquiry directed to the Newfoundland and Fisheries Research Station, St. John's, confirms the existence of shrimp in many Newfoundland waters; the size is generally large and often suited to commercial purposes, but the frequent presence of large boulders and other obstructions would be likely to make shrimp fishing difficult in a number of areas.

Tangier, Morocco—This year's fishing season in French Morocco according to informed sources, was unfavorable because the sardine schools traveled northward to waters off Portugal. The fishing season is almost over, states a September 5 American Consular dispatch from Tangier. Present inability of most Moroccan fishermen to navigate farther north than the entrance to the Mediterranean is a source of anxiety for future seasons, and contributes to the present serious crisis facing the fishing and canning industry in that country.

Bergen, Norway—For the past six weeks, record quantities of tuna fish have been landed by Norwegian fishermen off the coast of western Norway, south of Bergen, according to an August 28 news item from the Norwegian Information Service. Large catches have been made off the northern Helgeland district, too. Most of the fishing is done with purse seines, rather than with harpoons and trawl, as in former days.

The unprecedented catch of tuna fish has strained cold-storage and transport facilities to the limit. In fact, from time to time, supplies have exceeded shore and shipping facilities to the point that tuna fishing has been temporarily banned, as authorized under the fisheries act.

The tuna is largely going to Italian canneries, some of which are located as far south as Sicily. Altogether, the Norwegian state railways have delivered about 550 carloads of frozen tuna to Italy. Other shipments have been made by refrigerated transport vessels.

Lisbon, Portugal—An Aveiro (Portugal) fishing company has purchased two American submarine chasers for use in tuna fishing, reports an August 29 American Embassy dispatch from Lisbon. Press reports indicate that the vessels are equipped with two 900 hp motors, and have refrigerated compartments with a capacity of 450 metric tons of fish.

One of these vessels completed a successful trial run on August 26 and both are expected to leave shortly to fish with lines in the area of the Canary Islands.

Except for a few small boats operating from the Cabo Verde Islands, Portuguese tuna fishing has been limited to about three months a year when (May-August) tuna are caught by traps off the Alcarve coast. These fish, with dark meat, are sold mainly to Italy. Use of powerful fishing craft and line fishing should make possible a year-round supply of tuna, of which a major proportion would be of the white-meat variety acceptable to the American market.

Goteberg, Sweden—Electric tuna fishing in Scandinavian waters has now been successfully tried by Swedish fishermen. It is considered such a success that it may revolutionize tuna fishing, reports an August 27 dispatch from the American Embassy at Goteberg.

The method used originates from an invention made by three German scientists who, after some years of experiments, have succeeded in reaching a satisfactory method for electrical fishing of tuna.

The tuna caught in Scandinavian waters can reach a weight of about 800 pounds and are difficult to boat after they are hooked. It is estimated that nine out of ten fish are lost while being hauled on board, but with this new method all hooked fish can easily be hauled on board.

The equipment used is very simple. It consists of one motor converter receiving its current from an accumulator. Small hooks are used. When the fish has been hooked it generally turns around and, when lying parallel with the line, starts running out to free itself. When it turns, it comes into an electric field developed by poles in the hook and the line. The fish becomes temporarily unconscious and can easily be hauled on board. The equipment is easy to manage. It generally consists of three lines with small hooks baited with mackerel and kept at the required depth by floats. When the floats show that a fish has been hooked, the current is turned on and the fish hauled in. The fish has to be killed immediately when on board as it does not remain unconscious very long after the current has been cut off.

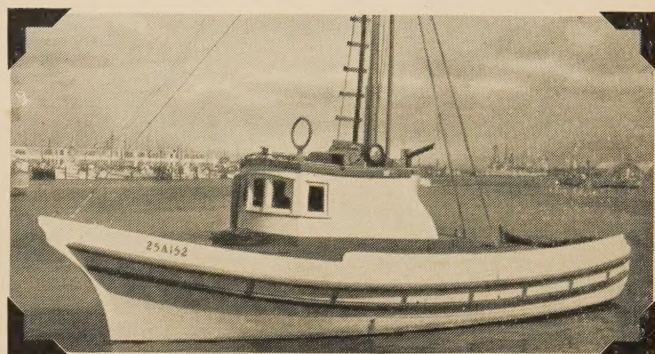
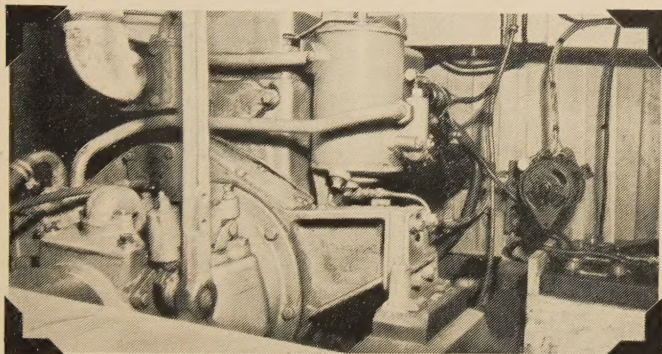
This electrical method appears to save manpower as two men can fish with three lines and haul one fish on board simultaneously, whereas by the old method it required at least four men on a boat and still only one fish could be hauled on board at a time. In addition, the number of fish lost was very large.

The price of this equipment is not known, but it is stated to be low and within the range of all fishermen engaged in tuna fishing. It is reported from Norway that electrical tuna-fishing equipment can be fully paid for in a short time.

STANDARD ENGINEER'S REPORT

LUBRICANT	DATA <i>Heavy Duty RPM Motor Oil</i>
UNIT	<i>115 H.P. marine engine</i>
SERVICE	<i>Fishing boat</i> <i>"Four Brothers"</i>
CONDITIONS	<i>Low engine temperatures—</i> <i>constant load</i>
FIRM	<i>V. Passanisi & Son</i> <i>San Diego, Calif.</i>

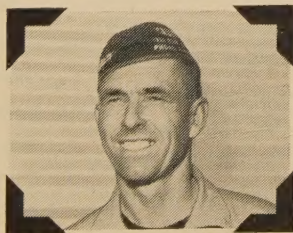
Engine clean after 1 1/3 years of "cold" operation!



HEAVY DUTY RPM MOTOR OIL has kept this 115 H.P. marine engine clean and running perfectly for 16 months, despite tough work 10 hours a day, 5 days a week. The engine powers the 32 foot,

10 ft. beam fishing boat, "Four Brothers," operated by V. Passanisi and his son, Frank. When inspected recently, engine showed no deposits, all rings and bearings were in good condition.

FRANK PASSANISI says, "Carbon is a common problem in most fishing boat engines because they work 'cold'—at temperatures too low for best operation. However, Heavy Duty 'RPM' solved that problem for us. The way our engine runs now, we should be able to go 5 years before thinking of an overhaul."



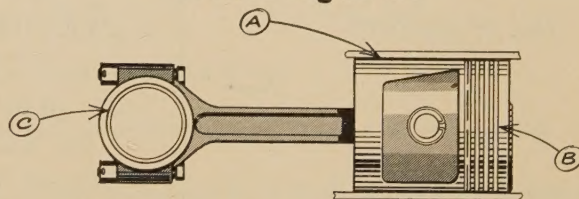
MECHANIC E. B. DAVIS, owner of Rosecrans Garage, San Diego, says, "When I opened this engine to grind the valves, it was the cleanest I'd ever seen in this type. There were no signs of wear in cylinders or on pistons."

REMARKS: Heavy Duty RPM Motor Oil was tested in the laboratory and in field use. Compared to premium type oils as designated by the American Petroleum Institute, Heavy Duty "RPM" doubles engine life—the time between major overhauls due to lubrication.



TRADEMARK "RPM" REG. U.S. PAT. OFF.

How Heavy Duty RPM Motor Oil doubles engine life



- Contains special compounds that keep lubricant on metal whether hot or cold—reduce starting and running wear and rusting when idle.
- Detergent makes carbon and soot contaminants harmless—keeps rings free, engine clean.
- Resists oxidation and corrosion, stops foaming.

STANDARD TECHNICAL SERVICE checked this product performance. For expert help on lubrication or fuel problems, call your Standard Fuel and Lubricant Engineer or Representative; or write Standard Oil Company of California, 225 Bush St., San Francisco.

STANDARD OIL COMPANY OF CALIFORNIA

PAN-AMERICAN
fisherman

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About this Issue . . .

BEHIND THE COVER

The story "Behind the Cover" starts on Page 9 of this issue. It is the story of a million dollar business. We expect to be criticized in some quarters for the detailed description of cannery operation; however, we take issue on the basis of the belief that many of our legislators in Congress have never seen a tuna cannery. We reach all of those legislators with PAN-AMERICAN FISHERMAN.

We felt that one of the most valuable pieces of equipment aboard a tuna clipper deserved some description, so we asked the San Diego Representative of

Sperry Gyroscope Company to supply us with the details. See Page 11.

The story of Australia's Canned Food Industry was sent in by the Australian News Service in San Francisco. Their \$16,000,000 yield in 1950-51 shows what is happening 'down in under.' See Page 13.

The Samoan Cannery story came to us through the courtesy of the National Cannery Association. We called it "COMPETITION!" 1,000 cases of tuna shipped duty free daily into the U. S. seems like competition to us. See Page 14.

TUNA CLIPPER OWNERS



You can add one or more trips each year with use of the

PIPER SUPER "135" CUB

With Specially Designed EDO Float Landing Gear

Successful clippers using the convenient Piper Super Cubs report savings of 20 days or more a trip; one or more extra trips per year.

From the air fish schools are quickly located; bait is quickly found; full boat loads obtained in the shortest time.

The Piper Cub can be easily carried by any boat of 100 tons or more. Special gear permits landing and take-off even in rough weather.

A special pilot training program is available for crew members.

CONGRATULATIONS to the WESTGATE-SUN HARBOR CO.

Best wishes to this great company in its modern, new plant. Many of the outstanding clippers in its fleet are equipped with the PIPER SUPER "135" CUB.

FOR COMPLETE INFORMATION PHONE OR WRITE TO

ED MOLITOR AIRCRAFT SERVICE

Southwest Entrance—off Harbor Drive
Phone Jackson 6321

LINDBERGH FIELD

SAN DIEGO

BAKER AIRCRAFT SALES

Administration Bldg. P.O. Box 8066
Phones — Long Beach 4-2005 — 40-8312

LONG BEACH AIRPORT

LONG BEACH

TUNA TARIFF TIME

A canner friend of ours sent along a letter which he had received the other day from a firm in Japan that wished to sell him some frozen tuna. This is such a curious document that we reproduce it here in full so that it may cast light on what the Japanese are up to:

"Gentlemen:
"As the Japanese Government announced today that additional quota of 6,000 tons frozen tuna is licensable for export to the United States under the following conditions, we cabled you as per a copy attached.

- 1) Quantity: 6,000 tons
- 2) Application date: Until October 3, 1952. In case the application would be less than 6,000 tons the above date will be extended by October 10th.
- 3) The application must be accompanied by the following documents:
 - (A) Export Contract
 - (B) Inspection Certification for export
 - (C) Packer's Declaration stating that:
 - (a) the contracted quantity specified in the application is essential for the plant due to the bad catch in the United States.
 - (b) The contracted price is higher than the present market price on same or similar fishes in the United States.
 - (c) It is considered that the contracted quantity will not (adversely) affect toward any part of tuna industries in the United States.
 - (d) The importation is essential for the plant for maintaining the market for the products.

"The above is for your information and we hope we will have an opportunity of doing business in this line with you in the quite near future even though it is to be expected that the further allotment will not be issued until end of March, 1953.

"We will keep you informed from time to time of the market condition in this country and we hope you will do the same also.

"Trusting to hear from you soon, we are
"Yours very truly,
-----"

Cast your eye over the things that must be in the "Packers Declaration" before the Japanese Government will permit frozen tuna to be exported to him, and ponder.

In the first place no tuna canner in the United States can truthfully make all of these statements, and no tuna canner in Southern California can truthfully make any of these four declarations, yet we are told that several of the small canners have signed such a document and that a famous American importer is working hard to get the large canners to

do the same under the threat that they will be cut off from future Japanese shipments if they do not.

The albacore catch in the United States this year is a little above that of last year in spite of the fact that low prices brought fewer boats into the fishery than were present last year. The catch of yellowfin tuna is greater than for last year despite the lay-ups that have been placed on sailings by the clipper fleet this year. The skipjack tuna fishing has been admittedly poorer this year than for the past two or three years. But it has still been so good that the Southern California canners had to slow down the operation of the clipper fleet this year to prevent more being landed.

The contracted price for Japanese tuna in the United States since post-war shipments started again is and always

has been lower than the market price for the same or similar fishes in the United States. For the larger Japanese albacore to be equal in cost to smaller U. S. albacore the price per ton has to be relatively less. Japanese albacore has always been priced equal to or less than domestic albacore is canned and sold as light meat tuna, as is all yellowfin tuna. Albacore yield about 20 per cent more cases per ton than yellowfin tuna. With a yellowfin price of \$320 per ton an equal price for albacore tuna would be about \$385 per ton, based on quantity of yield only and with no margin for difference in quality. The delivered price of albacore from Japan has not been higher than \$350 per ton this season.

To state that the shipment of 6,000 tons of frozen tuna into the United States, at a time when the price of albacore is abnormally low and the activity of tuna clippers is restricted, will not adversely affect any part of the tuna industry of the United States is ridiculous nonsense.

Some tuna canners could legitimately say that the importation of tuna from Japan is necessary for the maintaining of their product on the market. These would be canners who are so far removed geographically from the normal areas of tuna production by United States vessels that they cannot compete with more closely located canners for the catch from American boats.

As a matter of fact the only fish canners in the United States that have tuna canning as their primary activity are located in Southern California. The tuna canning industry of Southern California has had more albacore landed for it by domestic vessels this year than it wished to sell as white meat tuna. This is proved by the large volume of albacore it has canned this year as light meat tuna. It has had more yellowfin and skipjack tuna brought to it by domestic vessels than it cared to buy. This is proved by the amount it has slowed down the operation of the clipper fleet.

All of these things are as well known to the Japanese as they are to us. Why is it then that the Japanese insist on a canner declaring known falsehoods before they will sell
(Continued on page 24)



Congratulations to . . .

WESTGATE-SUN HARBOR COMPANY

upon completion of its ultramodern packing plant, and
cordial wishes for the continued growth, progress and
prosperity of this pioneer in the tuna industry.

National Steel and Shipbuilding Corporation, which
was selected to furnish all of the structural steel, is
happy to have been identified with this major project.



HARBOR DRIVE at 28th

SAN DIEGO, CALIFORNIA

EBB 'n FLOW

FIJI ISLAND TUNA

The tuna fishing fleet (except the *Iša Lei*) owned by a fishery company of Suva and the cannery in American Samoa (owned by another firm of that island) have been sold, according to the Australian Fisheries Newsletter of July 1952.

The joint enterprise was organized by a former world flier for the purpose of catching tuna in Fijian waters and canning them in American Samoa, which would enable the product to be admitted into the United States duty free. Unfortunately the Fijian company was unable to catch tuna in sufficient quantity.

The clipper, *Senibua*, which pioneered pole fishing with live bait in Australia, returned to San Pedro, California, where it was purchased. The two other clippers, *Seniroši* and *Senileba*, have been sold to the Indonesian government, and two 48-ft. bait boats to the Ceylon government.

The cannery was sold by a San Francisco-New York firm. The cannery was purchased by the Samoan Governor's office for U.S.\$40,000 to prevent it being removed to foreign territory.

JAPAN EXPORT INCREASE

Japanese tuna export quotas and check prices to the United States were the subject of a meeting of Japanese government officials on September 15, according to an unconfirmed report published on September 16 by the Japanese press.

Tuna allocations and the check price system on exports to the United States will be continued according to the press report, states an American Embassy dispatch from Tokyo. However, an additional 6,000 metric tons of frozen tuna will be authorized as part of the frozen tuna export quota. This means that the frozen tuna export quota of 12,000 metric tons for the quota year April 1, 1952, through March 31, 1953, will be increased to 18,000 metric tons.

The quota for canned tuna is 1,000,000 cases at the present time, and the press item pointed out that an increased allotment for canned tuna exports will be considered separately.

The press item also stated that United States approval is to be sought by Ambassador Araki for these actions.

JAPAN EXPORT CONTROLS

Important segments of the Japanese tuna industry are in favor of continu-

ing limitations on the export of tuna to the United States, reports an August 19 American Embassy dispatch from Tokyo.

The Japanese press (*Kyodo*, August 16) reported that Japanese exporters of canned tuna have announced "they will continue the voluntary control on export of their products to the United States." These exporters are included in the important council for tuna exports. This council also includes exporters of frozen tuna. Exports of tuna to the United States are limited by Japanese government regulations to 1,000,000 cases of canned tuna (brine and oil) and 12,000 tons of frozen tuna. These limitations are for the period April 1, 1952, to March 31, 1953.



Because of an unusually large run of albacore in June, the government is subject to heavy pressure by some units of the industry to raise the quota on frozen tuna. The proponents for relaxation of the control refer to consistent demands from United States importers for more Japanese frozen tuna. Increased demand for frozen tuna are also coming from Canada and Hawaii.

This comment was made after the publication of a "Foreign dispatch from Washington that American food canners have asked the Japanese government for an increase in shipments of Japanese canned tuna goods to the United States."

The Council for Tuna Exports "suggested that due consideration's will be

paid on the issue if the U. S. government formally asks for removal of the control."

It added, "Japan exported to the United States 11,500 tons (metric) of frozen tuna by mid-August since the beginning of this year. This figure represents an increase of 4,500 tons over the target for the period. Total volume to be exported to the United States during this year is 12,000 tons."

TROPICAL TUNA COMMISSION

Members of the Inter-American Tropical Tuna Commission met in San Jose August 13, 1952, for the fourth session of the Inter-American Tropical Tuna Commission, a San Jose American Embassy dispatch dated August 14 reports.

There were, in addition to the opening ceremonies, a morning session devoted primarily to administrative matters and an evening session devoted largely to a review of the scientific investigations of the tuna population in the eastern Pacific. No major problems presented themselves for discussion, and no new policy decisions were made. The commission adjourned the same day.

IMPORTED GROUND FISH FILLETS

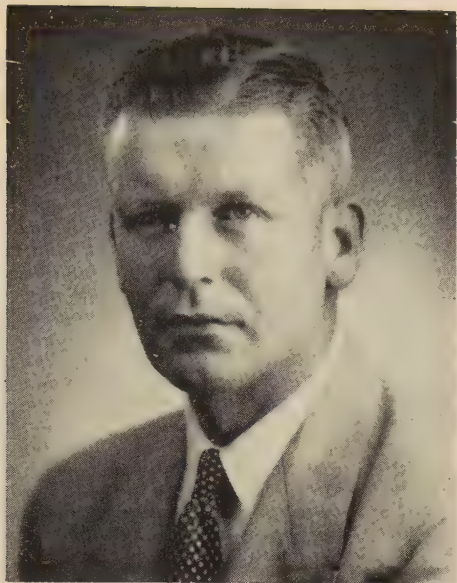
The United States Tariff Commission reported on September 4 that groundfish fillets are not being imported into the United States in such increased quantities as to cause or threaten serious injury to the domestic industry. The commission, therefore, made no recommendation to the president for the withdrawal or modification of the concession.

The commissions' report includes statements of the majority and minority views and a summary of the information assembled in the investigation. This investigation was made under section 7 of the Trade Agreements Extension Act of 1951 with respect to groundfish fillets subject to duty at rates imposed under paragraph 717 (b) of the Tariff Act of 1930, as modified pursuant to a tariff concession granted in the General Agreement of Tariffs and Trade.

Copies of the report may be secured upon request as long as the supply lasts. Address requests to the United States Tariff Commission, 8th and E Streets, NW, Washington 25, D. C.

SOUTH AFRICA LOBSTERS

Pending results of investigations by
(Continued on page 19)



James B. Lane
President



OPENING of Westgate-Sun Harbor Company's new million-dollar tuna canning plant at San Diego, California, this month marks the advent of a new era in Southern California's vast tuna industry. Emphasizing use of the most modern canning equipment known to the industry and new facilities guaranteeing cleanliness in all phases of production, the plant is referred to as the "show cannery of the west."

The giant structures housing the packing and cleaning rooms cover an area of more than 52,000 square feet and provide equipment for processing more than 250 tons of tuna daily. Thousands of additional square feet are utilized for reduction plant and warehousing facilities. The completed plant occupies more than 80,000 total square feet, with an additional outside service area of 160,000 square feet.

Gleaming tiled walls and stainless steel lines along smooth, sloping concrete floors embody the very latest in modern design. Overlooking the entire cleaning and packing room is a visitors' gallery behind glass where visitors will be encouraged to watch how their "Breast O' Chicken" tuna gets into the cans they find on neighborhood grocers' shelves. The six foot high tiled walls surrounding the entire packing area is an innovation in tuna plant construction and contributes to the assurance that every can of tuna is packed under the most sanitary conditions known to the industry.

Another large structure is the reduction plant, 60 feet by 200 feet, where by-products, an important related activity, will be processed. The reduction plant is capable of turning out 30 tons of fish meal daily. This product is in

SHOW CANNERY OF THE WEST

demand by stock raisers and poultry men.

To the average housewife, a tuna cannery is nothing more exciting than a brand name—the brand name she finds on the can of tuna she likes—and the name in small print that says, "Westgate-Sun Harbor, San Diego, California," doesn't click particularly as anything significant to her.

Like most everything else in the world today, canneries have histories, and these histories can be the most vital and significant reasons for the existence of the brand names that seem to be the things that sell canned tuna today, i.e., "Breast O' Chicken."

For more than a quarter of a century, the "Breast O' Chicken" label has symbolized high-quality tuna. Its distribution covers every major market in the United States. It is in these markets that Westgate-Sun Harbor in 1953 will expend more than \$1,000,000 in advertising and merchandising this product



William L. Robinson shows Wayne W. Prickett the 6 foot tiled walls.



Kenneth J. Berglund
Exec. Vice-President

which, in a little more than two years, has doubled its sales, and consequently finds more American housewives showing their preference for it than ever before.

Westgate-Sun Harbor has passed through a metamorphosis that is not unusual in this highly competitive tuna fishing and canning business. It is an old name in the tuna canning industry embracing as it does the old Westgate Sea Products Company and the Sun Harbor Packing Company. More recently the California Tuna Canning Company also was taken under the present firm's wing.

Westgate-Sun Harbor executive personnel include many well-known names in the tuna canning business. They are James B. Lane, last year's president of the California Fish Canners Association, president of the Company; Kenneth J. Berglund, executive vice-president; William L. Robinson, vice-president in charge of production; Glenn Martin, treasurer; Douglas Giddings, secretary and legal counsel; Harold P. Requa, Jr., director of advertising and promotion; Larry Kaner, sales manager; Jack Buchanan, manager of direct sales; Warren Enoch, superintendent; Wayne W. Prickett, plant engineer; and Janous Marks, fleet manager.

The Company's fleet of tuna clipper ships, which travel thousands of miles to grounds off the Central and South American coasts in quest of tuna, is among the finest in the industry. It is of sufficient size to bring into the Company's plant enough tuna annually

(Continued on page 15)

Know Your Seafoods

LARGE VARIETY OF DAILY MENUS

THE TUNA RESEARCH FOUNDATION

NATIONAL TUNA WEEK

With National Tuna Week coming up November 6-15, you'll want to take advantage of pre-holiday bargains on canned tuna available at your grocery store during this 10-day "Week" which gives you two shopping week-ends. Here are some facts and figures on this great economy food—canned tuna from California:

The canned tuna industry in the United States had its beginning as recently as World War I. The food shortage and economic stress of that period of history created a demand for protein-rich food, and tuna was the answer.

Today the primary types of tuna caught are the yellowfin, skipjack and albacore. The albacore, a bullet-shaped tuna of snow-white flesh and bland flavor, grows to the size of fifty to sixty pounds. The yellowfin and skipjack are tuna of light flesh, rosy pink in color, and with a richer, fuller taste than albacore.

More than 200 tuna clippers, high seas vessels which can travel 10,000 miles and remain away for 120 days or more before going back to port, account for more than 70 per cent of the yellowfin and skipjack landings.

On the tuna clippers fishing is done with a pole and line to which an unbarbed hook is attached. A fisherman called a "chummer" throws live bait overboard to attract the tuna. Fishing is very fast, and a tuna clipper manned with twelve men can land as much as 60 tons of tuna during a five-six hour period.

Tuna, as soon as they are caught, are stored in refrigerated holds on the tuna clippers, where they remain in a frozen state until they reach the canneries.

In canning the tuna, only the big lateral muscles, called loins, are processed because of their superior flavor and texture. Between 2.2 and 2.3 pounds of raw fish make one pound of canned fish.

In the United States, only six species of tuna are entitled to be labeled "tuna"

when canned. These species are the yellowfin, the skipjack, the albacore, the bluefin, the Oriental tuna and the little tuna. The related species of bonito and Pacific yellowtail can not legally be marketed as tuna.

There are three principal grades of canned tuna: the solid-pack tuna which consists of three large pieces of loins with one or two smaller pieces to fill out the can; the chunk-style tuna; and the flake or grated tuna which consists of small pieces that result from breaking up the tuna in the process of making the other two grades.

Men never tire of salads . . . substantial salads, salads fortified with canned tuna. A year-round favorite, but especially tempting in warm-weather, a main-course salad is a time and money saver for the busy homemaker. So capitalize on easy-to-make salads on days when temperatures soar, and make them especially appealing with flavorful chunks of tuna from California.

Try these recipes on your family and see for yourself how simple it is to prepare a nutritious salad meal with protein-rich tuna as the basis.

The popular can size for tuna is the 7-ounce can for solid-pack, and the 6½ ounce can for chunk size and grated tuna.

The oil in which tuna from California is packed is pure vegetable oil, and should never be discarded, but used to flavor dressings and sauces of all kinds.

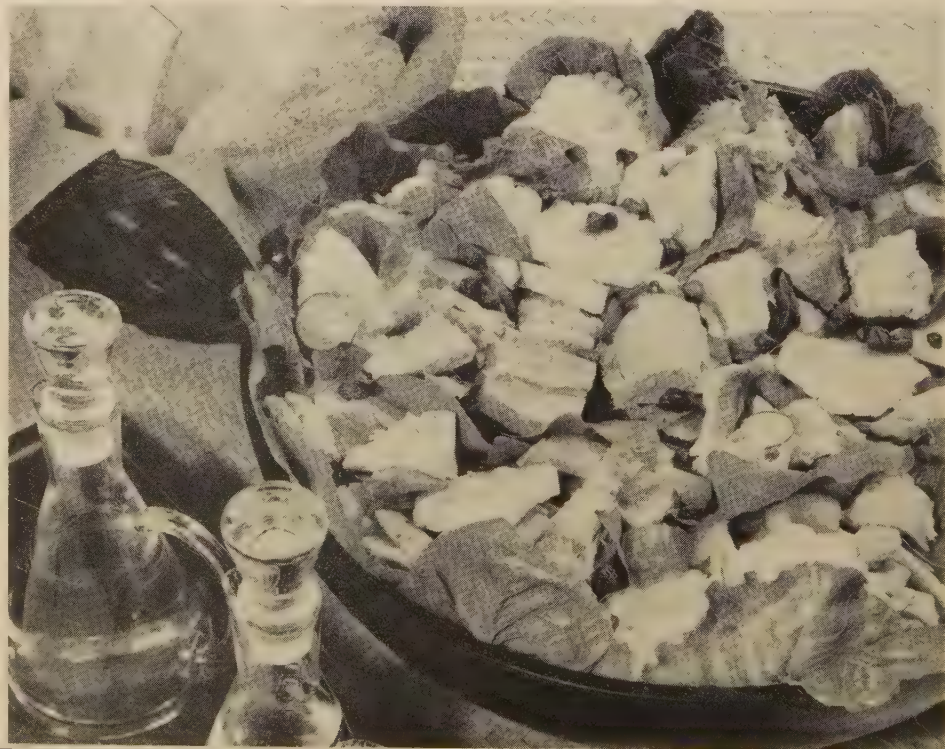
Nutrition-wise, tuna is one of the greatest of all protein foods. Recent experiments indicate that fish protein has a high biological value which is probably somewhat above that of beef protein and equivalent to milk protein.

WESTERN SALAD BOWL

(Makes 6 Servings)

- 1 7-ounce can solid-pack tuna, drained
- 1 small bunch romaine or leaf lettuce
- 1 cup chopped celery
- 1 medium-sized cucumber, scored and sliced
- 8 radishes, sliced
- 1 tablespoon capers
- Salt and freshly ground pepper, to taste
- French dressing

Break tuna into large chunks with fork. In a large bowl, cut or tear half of romaine into bite-size pieces. Add tuna and remaining ingredients; mix lightly. Line salad bowl with remaining romaine and fill with salad.



Recipes Kitchen-Tested in the Home Economics Department of . . .

Theodore R. Sills Company, 137 East 57th Street, New York 22, N. Y.



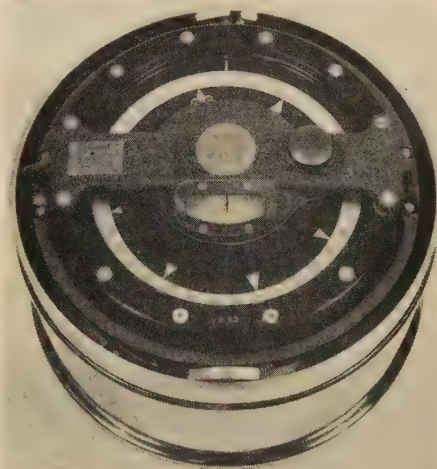
SPERRY MAGNETIC COMPASS PILOT

By
D. C. HAYHURST

STEERING of a ship on a straight course for a long period of time is a difficult and monotonous task for a helmsman to perform with precise judgment. As he tires, his ability to concentrate decreases. Small course deviation which he fails to detect becomes large deviation, too much rudder is applied, and the ship follows a sinuous course resulting in a waste of power in both steering and main engines.

The Sperry Magnetic Compass Pilot has been developed to provide Automatic Steering for boats up to approximately 150 feet in length using a conventional Magnetic Compass for azimuth reference, and allowing the helmsman freedom to leave the wheel while in open waters. The Magnetic Compass Pilot instantly detects small course deviation and applies the proper degree of corrective rudder. High sensitivity is obtained by means of vacuum tube Amplification. The system can be adjusted to operate with very small course deviation. The vessel is completely maneuverable under Magnetic Compass Pilot Control and will automatically assume any heading to which the course selector dial is set. The Controller, above the Magnetic Compass, causes no deviation or disturbance of the Compass Card, permitting the compass to be used for both navigation and automatic steering. This requires the adjusting of only one Magnetic Compass in the wheel house. For small craft such as fishing vessels, yachts and work boats, the Sperry Pilot has proved to be a great advantage as it relieves the helmsman from the monotonous task of standing at the wheel, and releases him for other duties. At the same time, a definite increase in speed results as the Sperry Pilot is more accurate and uses less rudder than a human helmsman under all conditions, from calm water to a heavy following sea.

Description and function of equipment: The Magnetic Compass Pilot comprises a Kelvin-White 8 inch, under-lighted Magnetic Compass with Sperry Magnetometer type Controller, and Amplifier. The Controller fits over the Compass bezel rings. It consists of a Magnetometer type pick-up coil, a course selector knob for setting the course to be steered or maneuvering the vessel when under Automatic Control.



The Compass is mounted in a standard brass shelf binnacle, chromeplated. This Compass has a period designed specifically for Automatic Steering. It resists the effects of Northerly turning error and gives a steady directional reference, resulting in a minimum of rudder applications.

A four-tube electronics Amplifier steps up the signals from the Magnetometer and converts them into an output which actuates the steering gear. The Amplifier also combines repeat-back signals from the steering gear with the signals of the Controller so as to cut off rudder movement when the desired rudder angle is obtained. The main "ON OFF" Switch and Rudder and Weather adjustment knobs are located on the face of the Amplifier Operation.

OPERATION: The Magnetic Compass Pilot is extremely simple and easy to

operate. No special operating instructions are required.

Turn the Controller Knob until the dial indicates the same heading as the compass. Switch the Pilot "on." Now "dial" the course you wish to steer. The vessel will turn to the selected course and hold it until further change is made. With this equipment it is *never* necessary to bring the vessel around to the desired course by hand and then square her away on automatic steering.

To change course — automatic — the operator simply leaves the Pilot on and "dials" a new course.

To change course—manual—the operator switches the Pilot off and steers by hand. If a Remote Controller is supplied, the operator can switch to "Remote Control" and steer as desired. When the switch on the Switch Box is turned to "automatic" the vessel will immediately return to the course set in on the Controller and continue to hold it automatically.

In a rough sea increase the Weather Adjustment to obtain satisfactory steering without excessive use of rudder. It is never necessary to take over and steer by hand, even in a heavy following sea.



The Magnetic Compass Pilot is designed to provide good steering under all conditions of sea and weather.

At the present time the following
(Continued on page 24)

PROGRESS & PRODUCTION



G. C. Rosay

CENTRAL AMERICA TOUR

G. C. Rasey, Engine Sales Manager of Enterprise Engine & Machinery Company, of San Francisco, is on a thirty-day survey and inspection trip in Central America. This follows a recent similar trip to Mexico.

Among the stops Mr. Rasey plans are Guatemala, Honduras, Nicaragua, El Salvador, Costa Rica and Panama. At these and other points he will inspect Enterprise installations and discuss marketing and distribution conditions.

Enterprise Engine & Machinery Company is the Diesel Engine Division of General Metals Corporation with heavy market interests both in the United States and abroad.

C. J. HENDRY

San Francisco's Bay Area fishermen are showing a lively interest in the new fishing and marine equipment store opened last month by the C. J. Hendry-Johnson & Joseph companies. It is located at 496 Jefferson Street, on Fisherman's Wharf, San Francisco, at the foot of Hyde Street, and is one of the most colorful and complete stores ever opened for sport and commercial fishermen. A large parking area is located next to the new building, so customers from the downtown area, the adjoining

harbor, and the boating centers can complete their buying with the least delay.

The first floor area covers 5,000 feet, which allows space to carry a very large line of fishing gear, nets, jigs, hardware, lines, and tools and equipment for every type of West Coast fishing.

The former Johnson & Joseph store at 56 Sacramento Street has been closed, but the C. J. Hendry store at 27 Main Street will continue as before. The C. J. Hendry-Johnson & Joseph companies have a 96-year history in California, and operate six outlets in San Francisco, San Pedro, and San Diego.

CATERPILLAR BOOKLET

How equipment is engineered to perform is revealed in a new 12-page booklet of that title published by Caterpillar Tractor Co.

The reader is presented with a pictorial inspection of research and engineering operations. Special tests and experiments are pictured and described. Experiments are matched against operating conditions to show the comparison.

Strain tests on parts, tractor and engine laboratory work, fuel injection analysis, proving ground operations, "cold room" experiments at 65° below

zero—these are a few of the topics treated in the booklet.

Caterpillar's policy of continuous machine improvement is outlined by examples for a specific tractor—the D4. The history of Caterpillar air filter development is also included.

Copies of ENGINEERED TO PERFORM (Form 30429) are available from Caterpillar dealers or Caterpillar Tractor Co., Peoria 8, Ill.

HAYSSEN WRAPPING MACHINE

At the 1952 Western Packaging Exposition in Los Angeles, the Hayssen Manufacturing Co., of Sheboygan, Wis., exhibited a "V-Type Underfold" Weiner Wrapping Machine. According to W. H. Jaenicke, President of Mailler-Searles (pictured below), more Hayssen Machines were sold during the show than at any show since World War II ended. Mailler-Searles, with home office at San Francisco, and offices at Los Angeles and Seattle, is the West Coast distributor for Hayssen in the states of California, Oregon and Washington. In the photo below, illustrating the Hayssen convention booth, are from left to right, W. H. Jaenicke, two unidentified visitors, J. C. Johnston, Hayssen General Manager; Harry Krugh and Don Smith of the Mailler-Searles Los Angeles office.

(Continued on page 19)



HAYSSEN WRAPPING MACHINE

Australia's CANNED FISH INDUSTRY

By
PETER KNOX



Production has since steadied at about 12,000,000 lbs. annually.

Fish canning on the Australian mainland began on a permanent basis in 1938 in an old boatshed at Narooma, a small seaside resort on the south coast of New South Wales. Until then practically all of Australia's canned fish was imported, although one Tasmanian firm, Henry Jones and Company Pty, Ltd., of Hobart, had been canning since 1905.

By 1940 a modern \$55,000 factory with an annual capacity of 8,000,000 12-oz. cans, was in production for Narooma Fish Canning Pty. Ltd.

Canneries were also established in every state except Queensland.

At Eden, New South Wales, Australian Fishing Industries amalgamated with the canning interests of Green's Products Ltd. to form one of Australia's largest and most efficient fish processing concerns.

Australian Fishing Industries had constructed a concrete wall around the beach front, a jetty 530 feet long by 20 feet wide equipped with floodlights for night work, filled in a lagoon, removed a sandhill and installed iceworks, a cold store, a cannery, a Canadian smokehouse, a quick freezer, slipway engineering facilities, a boat building shop, a large ship's chandlery store and a canteen which serves three-course meals well into the night.

It built houses for its staff and helped establish a timber mill to provide the timber. It built a dam to insure water supply.

At the cannery of the combined company, Eden Canneries Pty. Ltd., fishermen unload their catch, see it weighed and receive payment within a few minutes. Ice is delivered into their boats and shore engineers carry out dockside maintenance and repairs to avoid unprofitable delays in port.

(Continued on page 21)



AUSTRALIANS are looking with mounting interest to the potential wealth held by the seas fringing their continent.

The 12,210 miles of coastline range from the tropical waters of the north, home of the trochus, pearl and beche-de-mer, to the southern icy haunts of the Antarctic whale.

In 1950-51 these seas yielded Australians \$16,000,000 worth of scale fish, prawns, oysters, whale oil and meal, mother of pearl and trochus shell.

In the same period frozen crayfish tails exported to the United States of America earned \$1,800,000.

With this sea harvest has come a spectacular rise in the importance of the Australian canned fish industry. The trade has risen from almost rock-bottom in 1938 to a vigorous, progressive industry with a capital value of just on \$2,240,000.

Production, in common with many other of Australia's fast developing secondary industries, has swept upwards in recent years, but still satisfies only about one quarter of annual requirements.

In 1939-40 approximately 2,936,000 lbs. of fish were used for canning in Australia. During the peak period in 1948-49—partly caused by temporary British Ministry of Food orders—more than 16,000,000 lbs. of fish, worth more than \$2,240,000 wholesale, were canned.



COMPETITION!

THE SAMOAN CANNERY



THE highly controversial and complicated status, both nationally and internationally, of Southern California's tuna industry, at least in the Department of the Interior, seems adequately demonstrated by the following statements attributed by the Washington Bureau of Copley Press on Oct. 10 to Acting Interior Secretary Vernon D. Northrop.

"Mr. Northrop announced the Fish and Wildlife Service has launched its 'comprehensive' survey of the tuna industry in a move to help the enterprise 'achieve and maintain a sound position in the domestic economy.'

"The announcement by Northrop said 'a crisis in the domestic tuna industry arose last year when duty-free imports of frozen tuna from Japan and Latin America, together with increased imports of brine-packed tuna from Japan, reached unprecedented proportions.

"U. S. tuna fishermen and cannery operators, particularly on the West Coast, found domestic markets oversupplied with tuna and were forced to keep their vessels tied up and to close several (packing) plants.

"Less than an hour after Northrop's announcement, he issued a second one saying that 'the government of American Samoa owns a fully equipped fish cannery which it wants to lease so it can be placed in operation.'

"To make the offer more attractive, Northrop pointed out that because Samoa is a U. S. territory, under present law its products may enter the United States duty-free."

The Samoan Cannery

The Government of American Samoa will entertain proposals for the lease of a fish cannery which it owns, together with the equipment and facilities, located at Tutuila, American Samoa, according to the Branch of Commercial Fisheries, Fish and Wildlife Service. Bidders must be citizens or nationals of the United States, or if the bidder is a corporation or company, at least 75 per cent of the stock of or interest therein must be held by citizens or nationals of the United States.

American Samoa is a territory of the United States and under existing laws its products may enter the United States duty free. It is located 2,276 miles

south of Hawaii and, according to the results of recent studies by the Pacific Oceanic Fisheries Investigations, FAWS, is within less than a thousand miles from one of the richest sources of tuna in the Pacific.

The Tutuila cannery is a well-planned, modern installation consisting of four buildings with two roofed-over areas between the buildings. Each building is about 200 feet long and 50 feet wide. The buildings are designed to promote an orderly and efficient flow of materials from the fresh or frozen tuna receiving room to the canned tuna storage space. They contain the newer devices and material for hand-packing tuna. The plant is also equipped with a steam-jacketed rotary drier in which



waste products of a solid nature, such as heads, bones, viscera, and skin, may be processed into fish meal. Combustible gases from this dried are burned in the boiler fire boxes to minimize the odors discharged into the outside air. The plant is capable of handling 21 tons of tuna and of producing 1,000 cases of canned tuna each eight-hour day. The cold storage area, from a Freon refrigeration system is capable of freezing and/or storing approximately 240 tons of tuna. The cannery also contains several items of equipment under lease from the American Can Company at an aggregate annual rental of \$892.40. A lease of the cannery will not include this equipment. The successful bidder will probably have to make his own arrangements with the American Can Company if he wishes to use this equipment.

Dock facilities at the plant are adequate for use of the fishing vessels in unloading their catch and in outfitting for the next trip. Highway facilities

from points around the bay to these docks are adequate for transport of supplies and materials by truck. The standard utilities of electric power, potable water, and telephone services are available. Although the water supply may not now be adequate for year-around operation of the cannery, the Government of American Samoa is presently taking steps to increase the local water-storage capacity.

The supply of local workers for the cannery crew is said to be satisfactory on the basis of the short trial runs made to date.

Transportation facilities are available for ocean shipment to and from the mainland of the United States and Tutuila via Matson Lines freighters and via Union Steamship Lines. Scheduled trips to Samoa are made monthly. Vessels stop at Tutuila en route to the mainland about seven times a year, i.e., whenever a minimum of 350 tons of cargo is available for shipment to the mainland.

No airplane service is in operation in American Samoa at the present time. The New Zealand National Airlines now make flights about once weekly between British Samoa and Fiji where airlines stop en route to and from Hawaii and New Zealand or Australia. There is a good possibility that an air link between American Samoa, Western Samoa and Canton Island (which is a regular stop for airlines traveling between Hawaii and Fiji) will soon be established.

The chief concern of the Government of American Samoa is that the facilities of the fish cannery be operated successfully in order to improve the civilian economy of American Samoa by developing technical skills among the Samoans, and providing local income through wages and through ancillary enterprises. Accordingly, in evaluating the proposals submitted, primary consideration will be given to that part of the proposal which outlines a plan and contains detailed information upon which the government can determine that the prospective lessee has the necessary financial resources, experience, and the qualifications that would ensure a continuance and successful operation of the cannery. Proposals sub-

(Continued on page 22)

Westgate

(Continued from page 9)

for a pack of more than 1,500,000 cases or more than 72,000,000 cans. Millions of dollars are invested in the clippers upon which the Company relies for its raw fish. Operating at capacity, the plant will employ between 625 and 65 workers, of whom some 400 are women at the cleaning and packing tables. This employment does not, of course, include the many men who man the vessels of the Westgate-Sun Harbor fishing fleet at sea.

Many of the plant's innovations were installed under the supervision of William L. "Bill" Robinson, long recognized as one of the leading authorities in the tuna canning business on the West Coast. Robinson's assistant, Wayne W. Prickett, plant engineer, also solved many of the headaches that are characteristic of a million-dollar venture.

Prickett holds patents on some of the equipment in the new plant, among which is the Wayneco Company salter, a device which automatically precisions the amount of salt that is placed in each can of tuna as it passes along endless belt conveyor beneath the Salter. The Salters can be adjusted by dial control to alter the quantity of salt at such times as different sizes of cans may run through the lines. This latter improvement to the original equipment is expected soon to be installed on all Wayneco Company Salters throughout the world where they are used.

When the tuna clippers arrive from the fishing banks, which may, and fre-

quently are, as far away as Ecuador and Peru, they are pulled alongside the unloading pier, and open the refrigerated holds in which fish are stored aboard. At the new Westgate unloading pier, facilities provide for the unloading of two tuna clippers simultaneously. This operation is performed by men in small towers who control electric hoists to which are attached buckets that are lowered into the fish holds aboard the clippers.

The fish are placed into the buckets manually by members of the clipper's crew, and the tower man hoists them at a signal to the high platform where a chain, attached to the bottom of the bucket trips the bucket and dumps the fish onto an endless belt conveyor that transports them high up into the scale house for weighing. Two men, one from the cannery and one from the tuna clipper crew, observe the weighing of each lot as it drops from the endless belt into the weigh tanks on the scales.

When the reading is made the tank is dumped and the tuna slide down an inclined chute to the butchering tables inside the plant. The tuna are butchered and inspected preparatory to the initial cooking. The inspection is to determine if any spoilage may have occurred to the fish following catch and delivery to the canning plant.

The tuna are placed into wicker baskets, segregated according to varying sizes, and placed on carts which are wheeled into the cookers for the initial cooking process from two to nine hours at 212 to 216 degrees fahrenheit. Smaller fish require less cooking time.



The Scale House where fish are weighed after unloading from the clippers.

After the cooking they are placed in a cooling room for about 24 hours at room temperature, before they move into the cleaning and packing room.

Here long gleaming lines of stainless steel transport the fish before rows of white-clad women who perform the necessary operations of removing the heads, tails, skin, bones and dark meat. This material is placed on an endless stainless steel belt which carries it back to the forward end of the conveyor line where it is dumped into a screw type conveyor beneath the floor for transportation to the fish oil and meal plant.

All tuna are separated at the cleaning tables into four loins, which are placed by women on shelves before them. A checker is on hand to supervise the selection of the loins. They are then pushed onto the stainless steel belt where they move forward to the cutters.

The cutters used by Westgate were invented by Wayne Prickett, plant engineer. Most of the cutters in operation in tuna canning plants travel at high speeds. Prickett's cutters utilize additional blades and travel a fifty per cent of the speed of other cutters and are said to eliminate excessive service problems, as well as noise of operation.

At the cutters the tuna is automatically chopped into the precision-like pieces you find in your cans of "fancy" and "chunk pack" on the grocers' shelves. The cutting operation is performed on the endless stainless steel belt while the belt and tuna are in motion. It is then packed into cans. All "chunk style" and "flaked style" packs go through these cutters.

The larger solid loins that make up the "fancy solid pack" tuna are diverted from the line before reaching the cutters. This tuna travels another endless



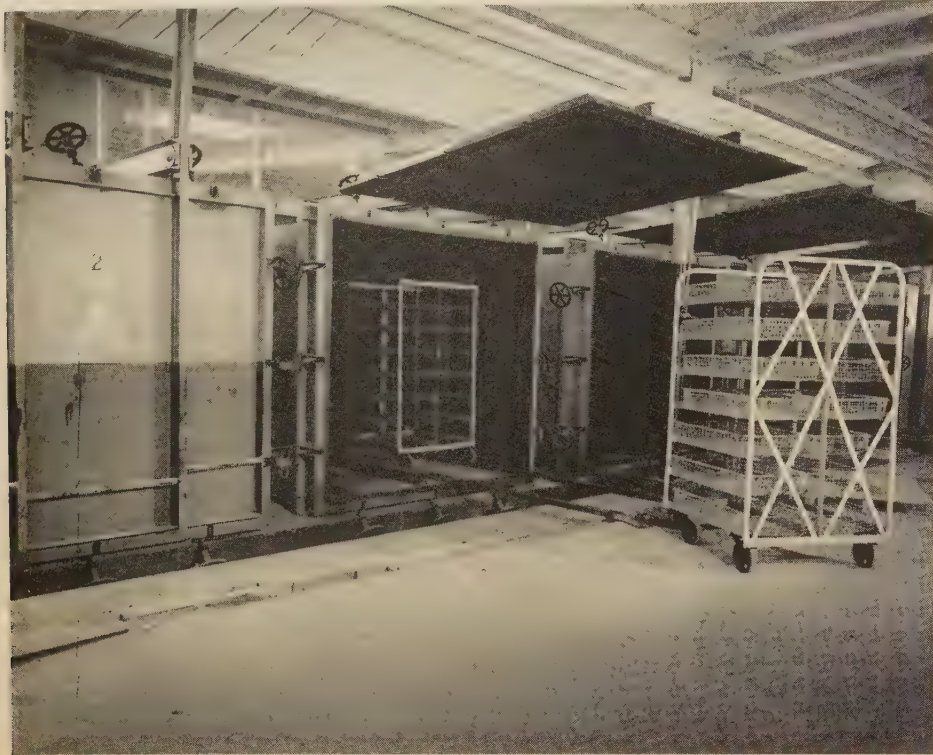
The unloading docks with a tuna clipper in the background.



belt into equipment which forms the loins into the shape found in the cans of "fancy solid pack." This equipment assures that each can receives exactly the same pack in manner of appearance.

The cans leaving the packed equipment travel past a station where they are weighed to assure that each can of

The butchering table, showing the conveyor belt and the racks in which the fish are placed.



tuna is identical by weight. If a can comes along that is slightly under weight a small piece of tuna flake is added; or, if another is over weight a small piece is removed. This is done in the center of the can where it does not disturb the appearance of the pack.

Leaving the weighing behind the canned tuna travels along the endless belt to the Wayneco Salters where the exact amount of salt is precision measured into each can. Next pure salad oil is added through a series of holes in a pipe which extend along the belt line. This operation requires a return along the belt line so the oil may be added gradually allowing it to settle to the bottom of the can.

The cans of tuna are then sealed with automatic sealing equipment. These high-speed sealers are capable of closing can's of tuna at the rate of 450 cans per minute. The normal rate of speed expected to be used by Westgate, however, will be in the neighborhood of 300 cans per minute. Only two canneries in the world employ the use of these special high-speed can sealers.

The salting and oiling process always leaves a slight deposit on the outside of the can's, so they are passed through a soap and water bath. The first bath is of soap water and the final rinse cleans the cans with warm water to remove all soap before they follow the conveyor line to the retort baskets.

Cookers where the initial cooking process is done.



Each retort basket is capable of holding about forty cases of loose cans of canned tuna. The retort baskets are placed into the retorts for the final cooking and sterilizing process. The retorts are similar in principle to the system used by housewives when canning vegetables and fruit.

It is simply a "cold-packing" process in which the final cooking is accomplished under pressure of steam. The State Board of Health prescribes a sliding scale under which the cooking of canned tuna must be done to effect the sterilizing necessary to eliminate all germs and to prevent spoilage that might result at a later date. The normal cooking and sterilizing time employed at Westgate-Sun Harbor, within the State Board of Health requirements, is

Steel cleaning and packing lines.

242 degrees fahrenheit for the standard one-half pound cans for a period of sixty minutes.

From the retorts the baskets of canned tuna are wheeled into still another room in the plant where they are set into hoppers that empty the retort baskets onto a conveyor belt that transfers them to a can unscrambler and points them into another conveyor line to the labeling machines. Four labeling machines are employed at the ends of as many conveyor lines.

After the cans are labeled they enter the casing machines where they are set in stacks of forty-eight cans to the case and pressed into cardboard cases. The cases are sealed top and bottom with glue in the sealing machines. All cases of tuna are sealed with glue; no stapling or stitching is done.

Outside the main canning and packing plant is the warehouse, with some 10,000 square feet of floor space to store the cases of canned tuna. Overhead beams of the roof structure in the warehouse were kept high enough during construction to permit cases to be stacked 110 high. This will allow 440 cases per stack, over the 10,000 square feet of floor space, except where necessary aisles will be left open for the fork lift trucks that are used to move the cases from the casing machines and to stack them in the warehouse.

Front end of the automatic cleaning and packing lines.

In addition to the canning plant, Westgate-Sun Harbor also has facilities in the new plant for the manufacture of fish oils and fish meal. This is the reduction plant, where all fish heads, skin, bones and dark meat are converted to the high-protein fish meal and oil used for feeding poultry and cattle. The materials for reduction reach the reduction plant through the means of the screw-type conveyor beneath the floor from the cleaning and packing tables.

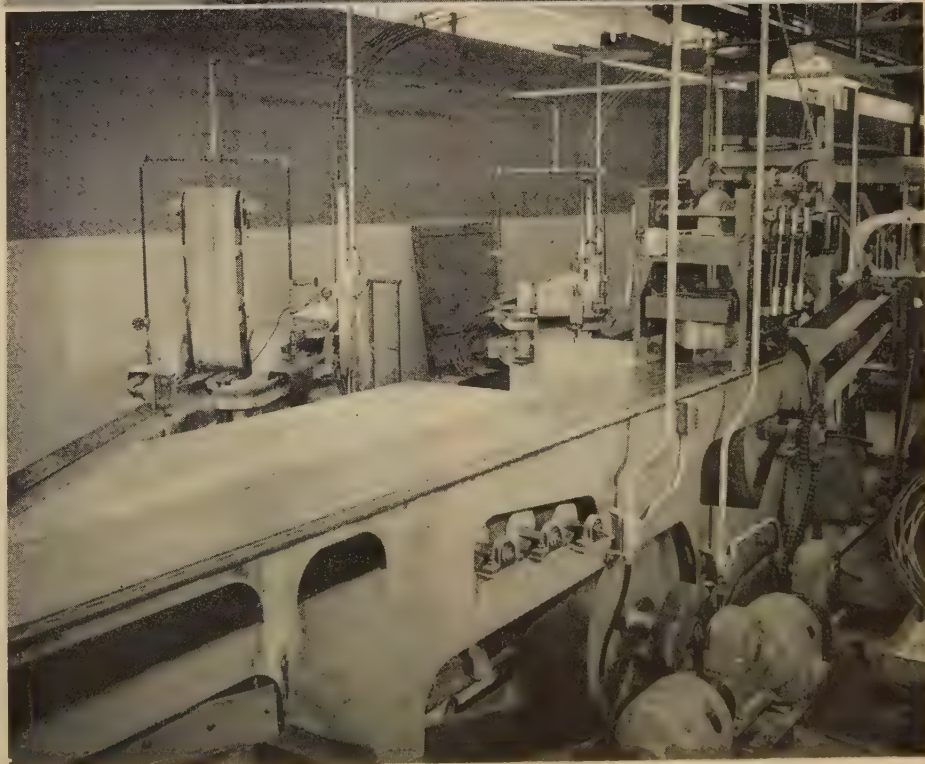
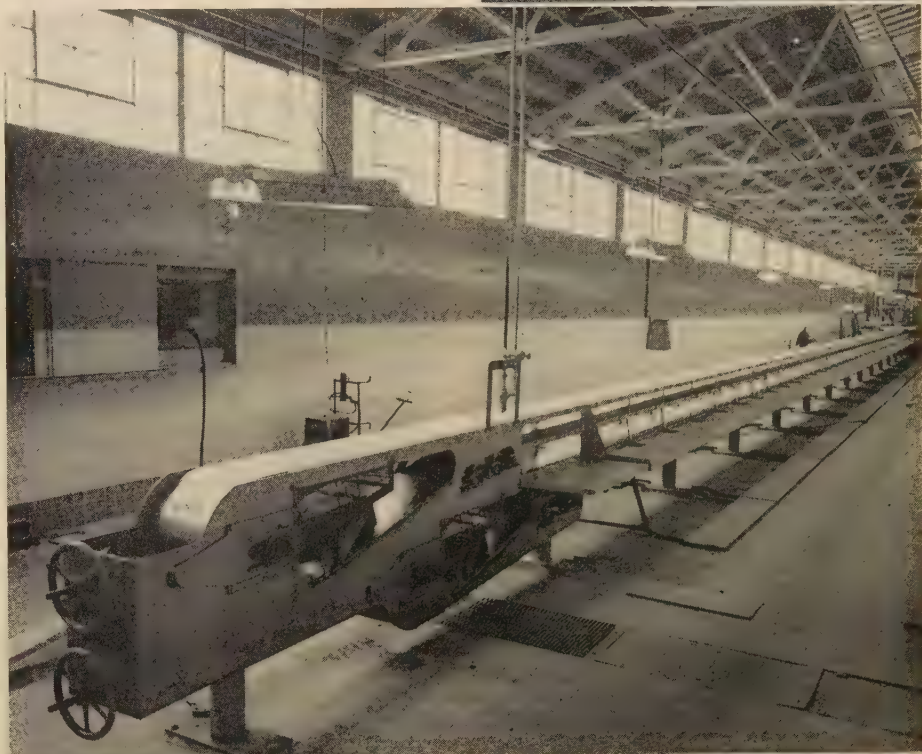
Leaving the cleaning room the material goes into a storage tank and then to cookers of a screw-type conveyor where it is subjected to steam pressure

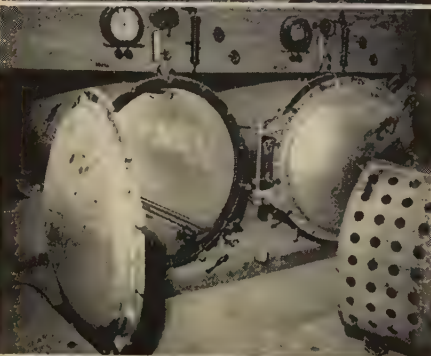
Pak-Shaper, and Cutter at the end of the packing table lines.

through jets. After cooking this material goes into a hydraulic press where all water and oil is pressed out.

Following the pressing the material is in the form of a dry, hard cake and must be ground in preparation for the steam dryer and is further dried and fed into still another grinder where it

Conveyor rails from the washer to the retort basket.

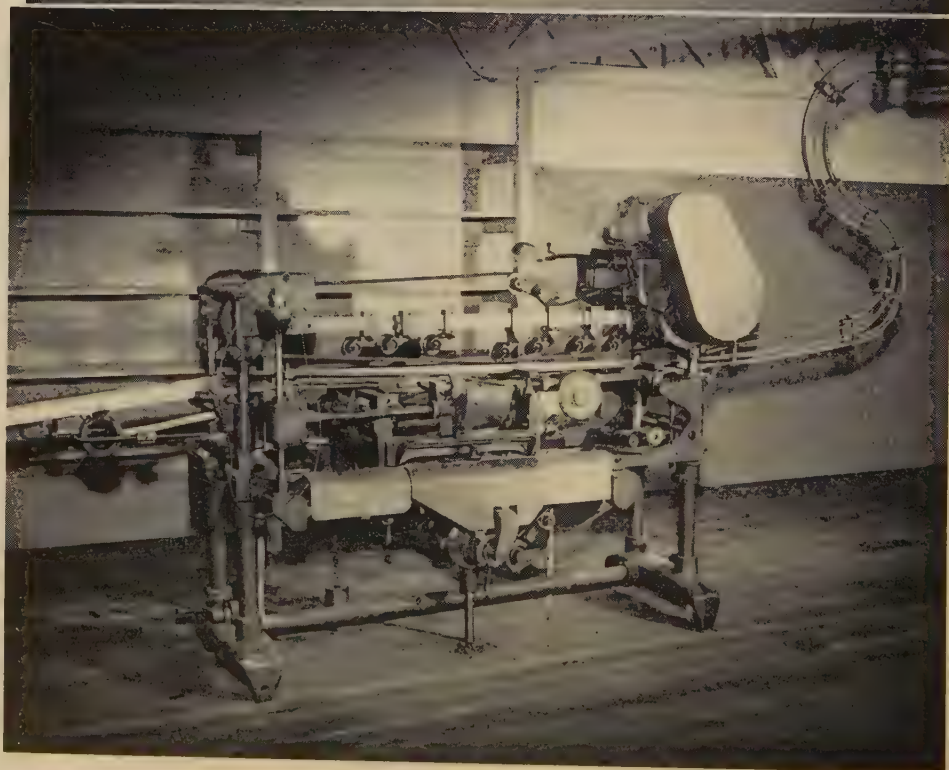
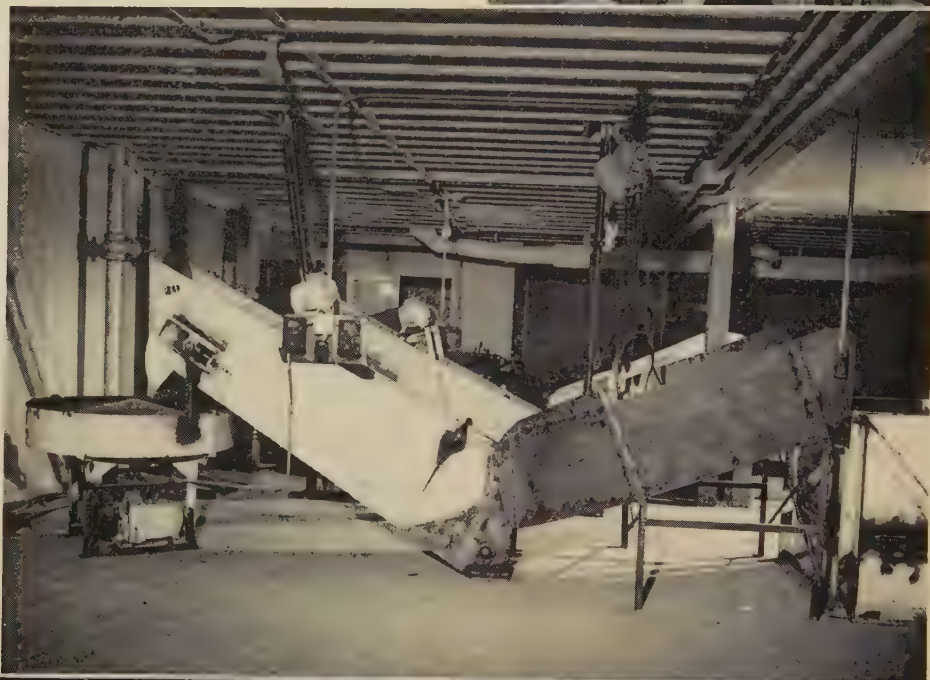
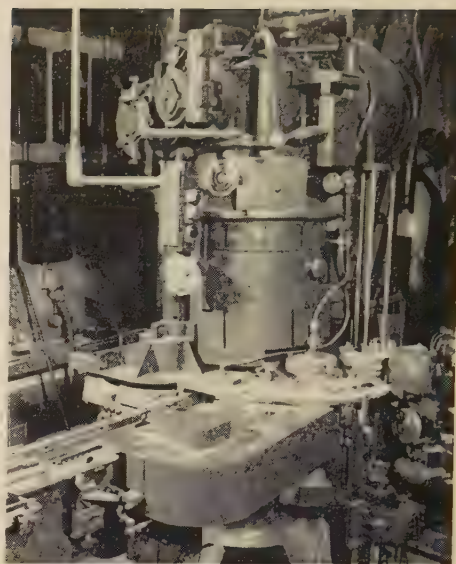


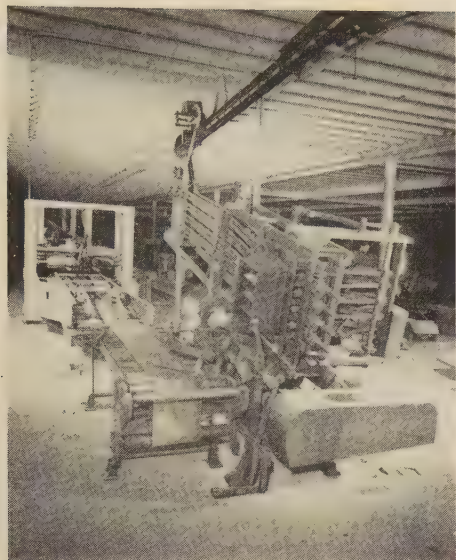


is ground fine enough for meal and blown to the sacking tubes for shipment.

The oil and water resulting from the pressing are diverted into a centrifuge where all small particles of solids are removed. The particles of solids go back to the drier again, while the oil and water pass through separators. The oil is stored in tanks where it is accumulated for shipment by tank cars.

The water, called "stick-water," goes through a series of evaporators where it gains the prescribed consistency that is known as "fish-solubles."





The Casing machine where 48 cans of tuna are set into cardboard cases and sealed.

(Upper Left)—Packing machine which presses the right amount of tuna into each can.

(Left Center)—Retorts with a retort basket in the foreground.

(Bottom Left)—Weighing station in the foreground, the Wayneco Salter, and the tank which holds the pure salad oil in which the tuna is packed.



(Upper Right)—Can sealer or closer equipment. This is one of five high-speed sealers capable of closing 450 cans of tuna per minute.

(Right Center)—Hopper, conveyor, and can unscrambler.

(Bottom Right)—Labeling machine where tuna cans roll through and the labels are glued on.

Flow

(Continued from page 8)

the South African Marine Biological Laboratories, 1952 quotas for the South African spiny lobster industry have been set at 5,300,000 pounds of canned and 2,140,00 pounds of frozen tails. Exports of these products are subject to quota control for conservation purposes according to the August 23 *Foreign Trade* of the Canadian Department of Trade and Commerce, and the purpose of the investigation is to determine whether the existing system of control ensures conservation of the country's spiny (rock) lobster resources.

RESEARCH VESSEL

The *Hugh M. Smith*, oceanographic research vessel of the Fish and Wildlife Service, docked at Pearl Harbor, re-

cently after a 38-day voyage to the Equatorial Pacific south and east of Hawaii. For the first time deep-running ocean currents were directly measured by a completely new method. This was done by lowering to desired levels a large cone-shaped drag on piano wire and checking its travel by a tell-tale buoy at the surface. Special surface drags were simultaneously followed. These drift objects were tracked by ship's radar. According to the director, Pacific oceanic fishery investigations, the results proved existence of much more complicated flow than previously supposed. Whereas the surface water at the Equator was flowing to the northwest, water at the Equator was flowing to the northwest, water at 200 to 300 feet was flowing strongly to the east.

This work on ocean currents is part of the explorations for tuna resources in the mid-Pacific. Previous voyages have located concentrations of tuna in commercial abundance and proved their location depends on the Equatorial current system. The shifts in location of the surface and deep currents cause changes in the tuna concentration. These need to be understood in order to insure successful fishing in this sea area where there are no landmarks by which to locate the fish.

A new shipboard aquarium system was tested on the trip and worked satisfactorily. It will be used to hatch tuna eggs and to rear the young fish to a stage where they can be accurately identified. With this new equipment it should be possible to learn where the different kinds of tuna spawn by netting and identifying the eggs and young over large sea areas.

BRITISH TRAWL DEPTHS

Experiments are in process in Hull and Grimsby with a type of trawl which will keep off the sea bottom and which is expected to catch many fish which go over the top of the ordinary trawl, reports *The Fishing News*, a British fishery periodical, in its August 23 issue. In addition, since the new type of trawl will operate off the bottom, it should be possible to avoid tearing the net on rocks or rocky bottom.

Icelandic fishermen have used this type of trawl and have considerably increased their catches. (Editor's note: This trawl seems similar to the floating trawl.)

The trawl is an old idea brought up to date. Net-making firms have been working in cooperation on it and it is based on sketches which were drawn in 1895. Net makers believe that it will be cheaper than the normal type because it needs no reels and bobbins. A net maker was quoted in a daily newspaper

(Continued on next page)

Progress

(Continued from page 12)

APPOINTMENT

The appointment of Mr. C. R. Boll, Jr., to the position of General Sales Manager, Cummins Engine Company, Inc., Columbus, Indiana, is announced by R. E. Huthstainer, president of the company.

According to the announcement, Mr. Boll will be responsible for Engine, Parts and Contract Sales, the Company Regional organization, Advertising and Sales Development.

Until his promotion, Mr. Boll was Manager—Engine Sales, a position he had held since December, 1948. His career at Cummins started in 1941 as a sales engineer following his graduation from Purdue University.

During World War II, Mr. Boll served as an officer in the Signal Corps, receiving special training in electronics at the University of Chicago, Harvard, and M.I.T. In 1945 and 1946, Mr. Boll was a Staff Officer in General MacArthur's Headquarters, both in Manila and Tokyo, working on radio and radar counter-measures and civil communications problems.

Upon his return from service, Mr. Boll rejoined the company, and in May, 1947, was promoted to Assistant Regional Manager, Great Lakes Region, with headquarters in Cleveland, Ohio. He served in this capacity until his appointment as Manager—Engine Sales in 1948.

(Continued on page 22)



C. R. Boll

(Continued from page 19)

as saying: "The nets, which will billow out under the water like huge aerodrome wind socks, will be drawn through the water above the sea bed at any depth required. The net—its secret is in its hauling gear—has already proved successful in trials."

It is essentially a cod trawl for seasonal use. Even if it should be adopted, the present type of trawl would still be needed for flounders and at times when other fish stay close to the bottom. The trawl has not yet been thoroughly tested at sea.

LONG-LINERS SUCCESSFUL

Long-liner fishing is readily becoming more popular in Newfoundland, according to an August 28 American Consular report from St. John's four long-liners, operating experimentally this year off the northeast coast under the direction of the Canadian Federal Department of Fisheries, met with good success. Commercial fishing by this method should prove profitable.

The use of the "Cape Island" type of fishing boat, with which the government has been experimenting for some time and which appears suitable for fishing in Bonavista, is reported generally unsuitable for Newfoundland needs. In Bonavista Harbor, this type of craft rarely has to go out more than 30 miles from shore to make catches; in most other areas, however, trips up to 50 miles are often required to the "Cape Island" craft is not suited to deep-sea fishing under all conditions. This type of a boat, from which much was expected, resembles a glorified harbor craft or cabin cruiser with an open well aft, and Newfoundland fishermen are reported to hold that, whereas the vessel may be seaworthy enough under normal conditions, they definitely want a full-decked job in which they can make long trips with reasonable safety.

In any event, government experimentation with this proposed type of craft has served a good purpose in that it has focused attention of the industry on efficient boat design, and through experimental operation at sea has shown the advantages of long-lining. The old style banker and "Labrador floater" hand practically no superstructure; hence the problem of building craft superstructures never arose until now that additional designing is called for. The use of aluminum instead of wood in building deck houses is receiving attention and in the future may be put into general use in constructing both long-liners and seiners.

CANNING TRADE SCHOOL

A trade school for the canning industry was opened at Ledal, near Stavanger, Norway, towards the latter part of August, reports the August 30 issue of *The Fishing News*, a British fishery periodical. It is claimed to be the only school of its kind in the world and was built at an estimated cost of US\$420,000.

Courses at the school last 18 months and are designed to train workers for positions as foremen, supervisors, and production planners. A number of offices and institutions relating to the canning industry will move into the school. Since fish canning is an important part of the Norwegian canning industry, there no doubt will be training in fish canning operations.

EXPERIMENTAL FISHING

The *Cavalieri*, a California tuna vessel under charter of the Pacific Oceanic Fishery Investigations of the U. S. Fish and Wildlife Service, returned to Honolulu Friday, September 26, from a six weeks cruise to equatorial waters. The



captain and his crew of experienced fishermen from the Hawaiian tuna fleet brought back a capacity load of approximately 50 tons of tuna, with an additional 3 tons of marlin and shark. The venture was the first attempt at exploitation on a commercial basis of the rich yellowfin tuna grounds which have been discovered in the equatorial region south of Hawaii by research vessels of the Fish and Wildlife Service. It was also the first demonstration of the fact that the technique of longlining, of "flag-lining" as it is known in Hawaii, can be successfully employed by fishing vessels of the West Coast purse-seiner type for catching large, deep-swimming tuna in commercial quantities.

The captain reported that moderately good fishing was found during the first part of the cruise, but that very rich

catches were made in the vicinity of 3° North Latitude, 150° West Longitude in the last few days of the voyage.

Scientists on the staff of the Pacific Oceanic Fishery Investigations, accompanied the *Cavalieri* and made detailed scientific observations in connection with the fishing.

CANADIAN FISHERIES TRENDS

Production: Landings and landed values in the sea fisheries of Canada (other than Newfoundland) during June 1952 amounted to 132,749,000 lbs. (C\$8,550,000 to the fisherman). These figures were higher than the June 1951 totals by 13.5 and 16.1 per cent, respectively, according to the June 1952 *Monthly Review of Canadian Fisheries Statistics*.

For the first six months of 1952, landings totaled 602,058,000 lbs. valued at C\$27,301,000—higher by 13.2 and 9.6 per cent, respectively, than for the same period of 1951.

Pacific Coast: June landings and landed values (16,541,000 lbs. and C\$2,751,000) were higher by 9.1 and 11.0 per cent, respectively, than for June 1951. In the first half of 1952 landings and landed values of 228,707,000 lbs. and C\$9,273,000 were higher by 17.9 and 12.2 per cent, respectively, for the same six months of last year.

Exports: The value of Canadian fishery products exports during the first five months of 1952 amounted to C\$46.1 million as compared with C\$39.3 million for the same period of 1951. Exports of fresh and frozen (whole or dressed) fish and shellfish were slightly higher in volume, but lower in value, than for the same period of 1951. Exports of fresh and frozen fillets and smoked fish were higher, but those of other classifications were lower than in January-May 1951.

CANNED FISH & BY-PRODUCTS

Canned Fish & By-Products, 1951, Annual Summary, C.F.S. No. 772, was recently issued by the service's branch of commercial fisheries. This 20-page publication presents data on the U. S. and Alaska 1951 pack of canned fish and shellfish by commodities and by states. The number of plants canning or producing products and by-products is also given by area and by state, and historical statistics are included for certain major packs by species.

The pack of canned fishery products in the United States and Alaska in 1951 amounted to 800,514,576 pounds, valued at \$301,210,295 to the packers. This was a decrease of 17 per cent in volume and 9 per cent in value, compared with the 1950 production. These decreases resulted principally from smaller packs of tuna and California sardines (pil-

chards). Canned fishery products were packed in 473 plants in 21 states and Alaska during 1951.

California led in the production of canned fishery products with a pack of 388,296,199 pounds, valued at \$122,572,382. Alaska was second with 168,439,139 pounds, valued at \$80,748,052. These areas accounted for 70 per cent of the volume of the 1951 pack and 68 per cent of its value.

The 1951 production of fishery by-products in the United States and Alaska was valued at \$69,313,027—9 per cent less than in the previous year. The principal by-products were marine-animal oils, 18,172,308 gallons (valued at \$16,623,643); marine-animal scrap and meal, 209,756 tons (valued at \$25,373,897); marine pearl-shell, oyster shell, and fresh-water shell products valued at \$15,129,252; and fish solubles valued at \$4,128,356. By-products were produced in 275 plants in 24 states and Alaska during 1951.

Copies of this bulletin, C.F.S. No. 772, are available free upon request from the Division of Information, U. S. Fish and Wildlife Service, Washington 25, D. C.

LARGER TUNA BOATS

Japanese tuna fishermen are showing interest in larger boats for operations in distant parts of the Pacific. Plans have been completed to construct a 500-gross-ton boat which will be the largest boat of its kind in the Japanese tuna fishery. Several 300-gross-ton vessels are already in operation and several more of the same class are nearing completion, reports an American Embassy dispatch from Tokyo dated September 8.

The tuna-bonito fleet as of the end of 1951 (latest available published statistics of the Japanese Fisheries agency) consists of 1,698 boats, aggregating approximately 104,000 gross tons. Of this total 1,437 (64,663 gross tons) were wooden boats, many of which fish principally for bonito (skipjack). The balance of 261 were steel boats (39,345 gross tons) and engaged in tuna and some skipjack fishing. Most of the steel boats ((232) were in the 100- to 199-gross-ton class and only 8 in the 200-500-gross-ton class. Actually the largest tuna boat in 1951 was 314 gross tons.

According to the Japanese press (*Minato Shinbun*, August 28), the proposed 500-ton tuna ship will be a converted vessel—the *Akagi Maru* now engaged in transporting ice to Korea. The new vessel will have a 550 horsepower engine, capable of 9 knots. Conversion of the vessel will begin in September. October 20 was scheduled as the sailing date for his first tuna trip.

(Continued on page 25)

Australia

(Continued from page 13)

The cannery turns out 150,000 4-oz. tins, 70,000 16-oz. tins and 60,000 12-oz. tins of processed fish each week.

The Eden cannery is one of 17 plants in Australia, wholly or mainly engaged in canning fish. Australian salmon, barracouta, tuna, whitebait, mackerel, pilchards and minor quantities of other fish are processed, salmon and barracouta accounting for about 90 per cent of the total output.

The island of Tasmania is the largest canning state and usually produces over 40 per cent of the annual Australian output.

Australian canned fish production is limited only by the yields from fishing grounds.

Inshore fishing is already being exploited almost to capacity in southeastern Australia, the most densely peopled area. However, there are vast undeveloped trawling grounds along the north-west coast of Western Australia and in the Great Australian Bight. These have been neglected because of their distance from the centers of population, but many experts believe that air-freighting will eventually solve distance problems.

At present Australian interests are concentrating on tuna fishing to step up supplies to canneries. Tuna exist in commercial quantities in the waters of southeastern Australia and off the north-west coast of Western Australia.

Samples of Australian canned tuna have been well received overseas and the Australian public has responded favorably to it.

It seems likely that the Australian demand for tuna and other canned fish will rise shortly. Australia's population is rising at the rate of 2.6 per cent annually (1951 calendar year rate), through active immigration and natural increase.

With an expected population of about 11,000,000 by 1960 consuming fish at the 1950-51 rate (17.4 lbs. of fish per head, fresh whole weight basis) Australia will need at least another 45,000,000 lbs. of fish yearly. Australians are traditionally meat-eaters but food habits may alter and among the thousands of migrants coming to Australia every month are many whose home diet had included a lot of fish.

Besides this, much less canned fish will be imported into Australia in 1952-53 under the Federal Government's plan to save money by temporary import restrictions. In 1950-51 Australia imported nearly \$9,000,000 worth of fish principally from the United Kingdom,

South Africa, Norway, New Zealand and Russia.

With these supplies severely restricted, and the population increase at present outstripping the increase in agricultural product, the outlook for the fishing industry in Australia is bright. Even with big production increases of recent years only about 25 per cent of canned fish on the Australian market is now locally processed.

DUTCH EXPERT in planning and directing tuna-enterprise seeks position in any part of the world. Letters c/o 3800 New Hampshire Avenue, N.W., Apartment 104, Washington 11, D. C.

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Competition

(Continued from page 14)

mitted should contain an offer of the annual rental fee which the bidder would be willing to pay.

Each proposal must be accompanied by a certified or cashier's check in the sum of \$1,000 drawn to the order of the Treasurer of American Samoa. These checks will be returned to the unsuccessful bidders. The check of the successful bidder will be forfeited if he refuses or fails to execute the lease of the cannery but will be returned if he accepts an award and executes the lease. The Government of American Samoa reserves the right to reject any and all proposals.

The proposed lease will be for a pe-

riod of three years and the lessee shall have an option to renew for an additional three-year term on the same terms and conditions as the original lease. The lessee will be required to provide all maintenance, repairs, and replacements, to carry insurance covering loss by fire and other loss included under extended coverage policies (but not including loss by Act of God, hurricane, flood, war, or other cause beyond the lessee's control as may be specified in the lease.) The lessee will be required to pay all valid taxes, assessments, license fees or other levies imposed by the Government of American Samoa or by the Government of the United States.

Proposals must be submitted to the Governor of American Samoa at Tutuila, American Samoa, with a copy to the Director, Office of Territories, Department of the Interior, Washington 25, D. C., not later than December 15, 1952, and should state clearly and in detail:

1. Identity of the bidder, including citizenship and previous experience and that of any associates in the proposed venture.
2. Plans for operation of the cannery, including number of Samoans to be employed and number and nationality of non-Samoans to be employed.
3. Plans for obtaining sufficient fish to keep the cannery in operation.
4. Plans for transporting and marketing the product of the cannery.
5. Financial resources and ability to maintain a continuing and successful cannery operation.

Further inquiries regarding American Samoa and the leasing of the fish cannery in Tutuila should be directed to the Director, Office of Territories, Department of the Interior, Washington 25, D. C. The award of the lease to the successful bidder will be made by the Governor of American Samoa, after consultation with the Director, Office of Territories, Department of the Interior, no later than sixty days after the closing date for receipt of proposals.

The Office of Territories has a report prepared two years ago by Charles Butler, Technologist of the Fish and Wildlife Service, but recently revised somewhat and brought up to date which

it will furnish to anyone interested in this project on request.

Imports of materials such as supplies and equipment for this cannery are subject to the tariff regulations promulgated by the Governor of Samoa after consultation with Fono (the local legislative body.) It is understood that at the time Island Packers installed the plant the collection of such duties was waived and that collection of such duties on supplies and equipment was waived for an additional period of three years. While the above invitation does not discuss this point, it is believed that similar consideration could be negotiated by anyone interested in this proposal to lease the plant.

The matter of whether the plant could be operated by bringing frozen tuna from Japan or some other country has been discussed by the Office of Territories. There is reason to believe that if tuna were to be brought in in this form, the Governor of the Territory would give serious consideration to the imposition of a duty on such imports, since the principal reason for reactivation of the cannery is to give employment both in the plant, and in fishing to the native population.

Wage rates paid in Samoa, as may be expected, are considerably lower than those paid in the continental United States. However, while there is an ample supply of labor, some problems due to local customs, must certainly be expected.

Progress

(Continued from page 19)

PIERCE & GOLDEN COVE BRANDS

Pierce Brothers Fisheries, Inc., Santa Barbara, Calif., leading processors and packagers of quality frozen sea food products, has appointed Rockett-Lauritzen, Los Angeles, to handle all advertising for both the Pierce Brand, in San Francisco, and the Golden Cove Brand sea foods, in Southern California. Monte J. Curry is the account executive.

Radio and newspapers will be used to introduce the new Golden Cove Brand Abalone Patties, which are manufactured under Pierce Brothers patents, to the Los Angeles-San Diego housewife starting November 10. A newspaper schedule is planned to promote the Pierce Brand Abalone Patties in the Bay area, where the brand has been distributed for more than a year by Fortune Fisheries. The Los Angeles broker for the Golden Cove Brand is the Koulouris & Casaretto Co.

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FOOD AND DRUG STANDARDS

An unofficial print of the definitions and standards of identity and fill of container for shellfish issued under the Federal Food, Drug, and Cosmetic Act was issued by the Food and Drug Administration in June this year. The shellfish covered are canned shrimp, canned oysters, and raw oysters. The standards for these shellfish contained in the pamphlet were all previously published in the *Federal Register* several years ago.

The act requires the Federal Security Administrator to promulgate reasonable definitions and standards for food to promote honesty and fair dealing in the interest of consumers. After a standard goes into effect, it constitutes the official specification for that food for the purposes of enforcement of the act. To bear the name of the standardized food, a product may contain only those ingredients and components listed in the standard, in the amount specified. When optional ingredients are permitted, the standard designates those that must be named on the label. The common or usual name of standardized foods must appear on the label, but the act does not compel label declaration of required ingredients. In the case of unstandardized foods, the labels must name the ingredients.

Copies of *Shellfish Definitions and Standards Under the Federal Food, Drug, and Cosmetic Act* are for sale by the Superintendent of Documents, Washington 25, D. C., at 10 cents per copy.

* * *

STATEMENT OF THE OWNERSHIP, MANAGEMENT, AND CIRCULATION REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, AND JULY 2, 1946 OF PAN-AMERICAN FISHERMAN, PUBLISHED MONTHLY AT SAN DIEGO, CALIFORNIA, FOR 1952.

1. The names and addresses of the publisher, editor, and business manager are: Publisher, John T. McInnis, 127 So. Olive; Orange, California; Editor, Robert K. Lawson, 2313 Columbia St., San Diego, California; Business Manager, Robert K. Lawson, 2313 Columbia St., San Diego, California.

2. Names and address of stockholders owning or holding 1 per cent or more of total amount of stock are: M. O. Medina, 655 San Elijo, San Diego, Calif.; Joe M. Medina, Rm. No. 1, Broadway Pier Bldg., San Diego; Cecil W. Drake, c/o Tuna, Inc., P.O. Box 187, Moss Point, Miss.; Chas. Kaufman, 1081 So. Pascagoula St., Pascagoula, Miss.; Joaquin Medina, 1140 Harbor Dr., San Diego; Cosimo A. Cutri, 1016 First Nat'l Bank Bldg., San Diego; Mathew C. Monise, Rm. No. 1, Broadway Pier Bldg., San Diego; Louis De Falco, 1703 India St., San Diego; Miller-Gresham Accounting Service, Broadway Pier Bldg., San Diego; Henry Langhorst, 2110 Belt, San Diego; Joe Silva, 3144 Byron, San Diego 6, Calif.; George and Dorothy Soares, 3354 Trumbull, San Diego 6; Guy Silva, 1003 W. Brooks, San Diego; Joe Gaspar, 3222 Lowell, San Diego 6; John T. McInnis, 127 So. Olive, Orange, Calif.; J. A. Donnelley, 1403 Bank of America Bldg., San Diego; John W. Sutliff, 604 Cedar Street, San Diego; Alma A. Sutliff, 604 Cedar Street, San Diego.

3. The known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

Signed ROBERT K. LAWSON, Editor

Sworn to and subscribed before me this 30th day of September, 1952.

Thelma L. Gresham, Notary Public.
(Seal) (My commission expires March 28, 1953)

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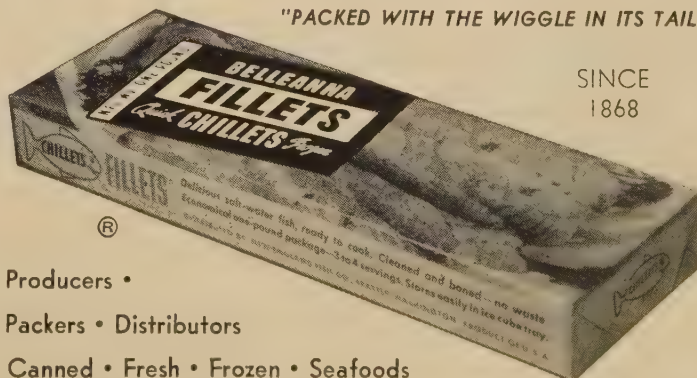
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Editorial

(Continued from page 6)

him frozen tuna? To answer this we must look at what the Japanese want.

The Japanese have these objectives: They want to get the tariff on canned tuna back down to 22½ per cent ad valorem, although they would happily settle for 30 per cent if someone made them a firm offer. They want no tariff on frozen tuna. They want both of these things bound in a trade agreement between the United States and Japan so as to get these matters out of reach of action by the Congress at a later date. Congress cannot change a tariff established under a trade agreement.

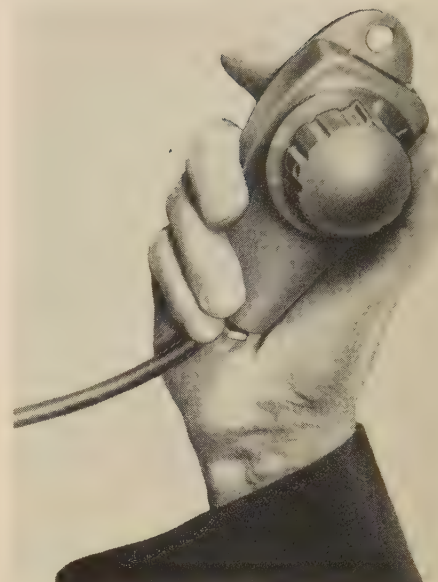
So long as the tuna canning industry

and the tuna catching industry of the West Coast are united, they have sufficient political affect in Washington, D. C., to stop this, or at least there is a serious threat that they can stop any such trade agreement:

The thing to do, say the Japanese, is to split the canning industry and the catching industry apart and then lick them one at a time. If American canners will sign a declaration such as the above, then the American canners cannot help the American tuna fishermen get a tariff on frozen tuna. If they should so testify before the Tariff Commission or the Congress all the Japanese have to do is file these declarations at a such a hearing and the testimony by the American canners would be destroyed.

The American canners have not got enough political strength by themselves, say the Japanese, to either raise the tariff on tuna canned in brine or to hold up the tariff on tuna canned in oil. Therefore if they can split the fishermen's strength away from supporting the canners, the canners are whipped.

If anybody can give a more sensible reason why the Japanese would demand such a ridiculous and mendacious declaration from an American tuna canner as a condition for sale of frozen tuna to him, this Editor would like to hear it.



Sperry

(Continued from page 11)

vessels operating out of San Diego are enjoying the use of the Sperry Magnetic Compass Pilot:

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M-V Sea Magic	M-V Mermaid
M-V Sea Preme	M-V Mary E. Petrich
M-V Judy S	M-V Cape Beverly
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Tuna boats of this 500-ton class are arousing special interest of Japanese tuna-boat operators as a basis for determining whether boats of this type can efficiently and profitably replace the mothership-type tuna fleet.

TUNA EXPORT QUOTA

The Japanese government on April 7, 1952, established a quota for the export of tuna to the United States for the period of April 1952 to March 1953. Recently the Japanese government informally advised the United States government that they now wished to reconsider the quota in view of the marked decrease in the catch of tuna by American and South American fishing boats and also in view of the desire of American packers and canneries for additional supplies of frozen tuna from Japan, and inquired as to the views of the United States government.

In reply, the Japanese were informed that the United States government has never advocated or endorsed quantitative limitations on tuna exports from Japan to the United States and to its territories. While the Japanese were advised that the responsibility in this matter continued to rest with them, it was indicated that the elimination of these

restrictions would be in accordance with the long-established and well-known policy of the United States to seek elimination of quantitative restrictions and reduction of other trade barriers.

PORT OF SAN DIEGO

Making a bid for more tonnage and greater service from the steamship lines serving the Pacific Coast, the Port of San Diego last month announced the appointment of two new staff directors.

Milton Hallen was named to the position of Port Traffic Manager, with Henry Roloff taking over the newly created post of Public Relations Director.

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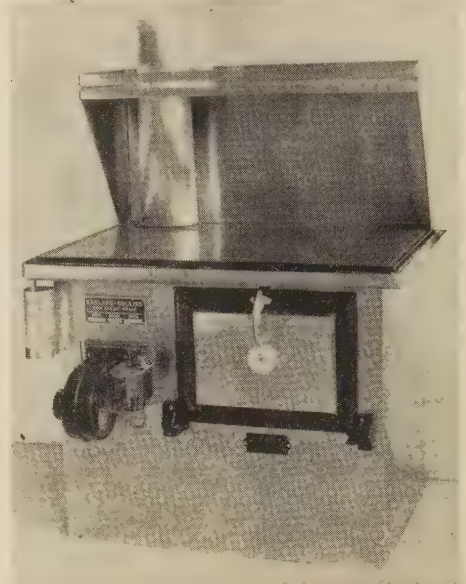
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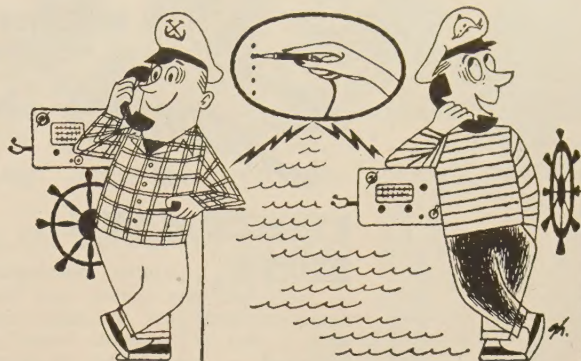
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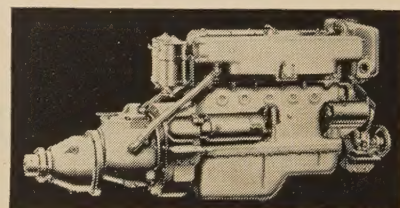
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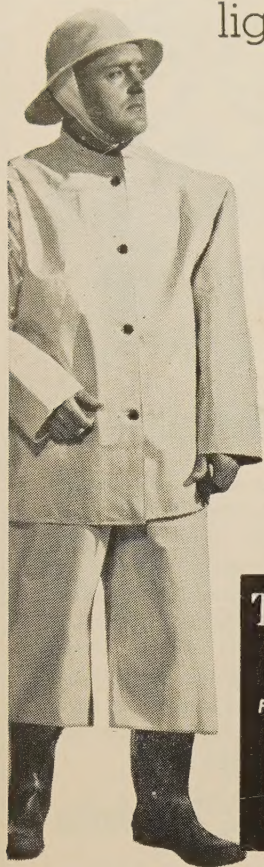
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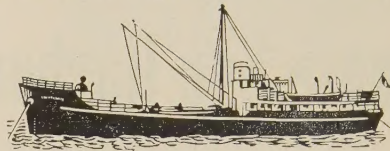
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